

REMARKS

Claims 1-18 are currently pending in this application. Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Bergstrom patent (U.S. No. 6,249,418). The Applicants respectfully traverse these rejections.

The Bergstrom patent is directed to a system for controlling an electromagnetic actuator. The Examiner points to the Bergstrom patent (col. 7, lines 4-7) for suggesting the limitations of claims 1, 7, and 14. Specifically, the Bergstrom patent (col. 7, lines 4-7) states that "the amplifier in FIG. 2 can be configured to allow both large positive and negative voltage swings resulting in the capability of both a rapid increase and a rapid decrease of the current in the coil." This broad statement merely indicates that the amplifier can be adjusted for increasing or decreasing the rate of change in induced current within the coil.

On the other hand, claims 1, 7, and 14 recite the step of holding a first solenoid at a voltage at a second polarity for a predetermined time period at a predetermined amplitude— with both the predetermined time period and the predetermined amplitude based on an induced current in a second solenoid. These limitations are not taught or suggested by the Bergstrom patent. Specifically, the Bergstrom patent does not teach or suggest holding the voltage at a predetermined amplitude for a predetermined time period. In addition, the Bergstrom patent also does not teach or suggest determining the predetermined amplitude and the predetermined time period based on the induced current in the second solenoid. Instead, the Bergstrom patent teaches adjusting the induced current and/or rate of change in induced current. In this regard, it will be appreciated that the cited section of the Bergstrom patent substantially differs from the claimed invention. For this reason, the Applicant respectfully submits that the Examiner has relied upon impermissible hindsight gleaned only from the Applicants' disclosure for modifying the Bergstrom patent to reconstruct the

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claimed invention. It is therefore respectfully submitted that claims 1, 7, and 14 are nonobvious and allowable notwithstanding the Bergstrom patent.

Furthermore, the Examiner points to the Bergstrom patent (col. 7, lines 4-7) for teaching claims 2-5, 8-12, and 15-18. As stated above, the Bergstrom patent (col. 7, lines 4-7) merely states that the amplifier can be modified for allowing large voltage swings thereby increasing the rate of change in induced current within the coil. On this tenuous basis, the Examiner states that the limitations of claims 2-5, 8-12, and 15-18 are obvious to one skilled in the art. Specifically, as stated in the Office Action, claims 2, 8, and 15 recite increasing the first predetermined time period when the induced current has a positive value. Also, claims 3, 9, and 16 recite increasing the predetermined amplitude when the induced current has a positive value. Moreover, claims 4, 10, and 17 recite decreasing the first predetermined time period when the current has a negative value. Finally, claims 5, 11, and 18 recite decreasing the predetermined amplitude when the induced current has a negative value. In other words, claims 2-5, 8-12, and 15-18 explain how the predetermined time period and the predetermined amplitude are based on the induced current in the second solenoid. However, as explained above, the Bergstrom patent only teaches adjusting an amplifier to change the induced current. One skilled in the art will understand that this disclosure does not reasonably teach or suggest the above claim limitations. Therefore, the Applicants respectfully submit that claims 2-5, 8-12, and 15-18 are nonobvious and allowable notwithstanding the Bergstrom patent.

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In view of the foregoing amendments and remarks, Applicant submits that all of the claims remaining in the case, namely claims 1-18, are allowable. The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 223-9500, if any unresolved matters remain.

Respectfully submitted,

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